

INTERACTIVE DATA: THE IMPACT ON ASSURANCE

NEW CHALLENGES FOR THE AUDIT PROFESSION

This paper results from research undertaken by the
Assurance Working Group of XBRL International,
www.xbrl.org

November, 2006

Readers are encouraged to consider the ideas in this paper. Any comments are welcome and should be sent to:

Jan Pasmooij - j.pasmooij@nivra.nl
Bill Swirsky – Bill.Swirsky@cica.ca

Principal author: Gerald Trites. FCA, XBRL Canada



EXECUTIVE SUMMARY

Background

The technology used in financial and business reporting is changing rapidly. A prime manifestation of this change is the growing use of Extensible Business Reporting Language (XBRL) – what is increasingly becoming known as Interactive Data.

The changes are happening around the world – in the United States, as evidenced through the activities of the Securities and Exchange Commission (SEC) and the Federal Deposit Insurance Corporation (FDIC), in Japan, Korea, the Netherlands, Belgium, the United Kingdom, Australia and Europe as a whole, through the support and activities of the European Commission and the Committee of European Banking Supervisors (CEBS).¹ With these changes, the world of financial and business reporting is moving from a paper, to an electronic, paradigm.

Because XBRL automates the exchange of information between information systems and provides for the fast and reliable transmission of data, the needs and expectations of information users are changing. And evidence shows that the users, such as analysts, want assurance on the data in many cases. The preparers and users of reports need to gain a greater understanding of this new technology, and, more importantly, its implications, both for reporting and for assurance on that reporting.

The impact of this change was recognized very recently in a paper released by the CEO's of the major audit firms, who stated that XBRL or something like it is likely at some point to revolutionize the entire company reporting model².

This paper addresses the assurance implications of this new reporting paradigm. It focuses on assurance on external reports. There are issues around the internal use of data and related assurance needs that are not covered in this paper.

Challenges

Financial and Business reporting is at the core of the activities of the public accounting profession. It is therefore critical that the profession come to a realization of the nature and extent of the changes taking place in the use of technology, specifically the adoption of XBRL. It is critical that the level of understanding be raised within the profession of the consequences of this change, and of the direction that must be taken to deal with it.

Current assurance practices and standards do not address the issues that arise when reports are released using XBRL. This is especially so if XBRL reports actually become the primary financial statements, rather than a secondary format carrying the same information as the original. It is virtually certain that XBRL reports will become the primary financial statements in certain circumstances.

The use of XBRL is being driven by regulators and government agencies around the world. In most situations, the change includes a need to report more quickly, which

¹ Further details of current activities are included in Appendix A

² "Global Capital Markets and the Global Economy.", November, 2006, a paper released by the CEO's of the International Audit firms/networks.

requires reporting organizations to gather and assemble information more quickly. A good example of this is found in the requirements of the Sarbanes Oxley Act of the United States. Changing expectations will truly revolutionize financial and business reporting.

It would be naive and short-sighted to assume that the changes we now observe taking place define the scope of the changes that will occur in the future. The challenge to the profession is to build a foundation for future changes - to more frequent, even real time reporting, and to more in-depth reporting of structured and unstructured information. This will include new and revised assurance standards, as well as guidance on the internal controls within the XBRL process itself.

Solution alternatives

There are several different scenarios in which XBRL is or will be used, and the assurance implications vary with those scenarios. This paper outlines the scenarios that presently exist, and those that are expected to occur in the future. The paper deals extensively with the most common scenario at present – that where traditional financial statements are converted to XBRL format and both versions presented for external consumption. It is proposed that a solution making use of ISA 3000 is appropriate for this purpose. However, important changes are required; therefore we need to develop a specific standard 30xx (based on ISA 3000) which deals with XBRL filings.

For the other scenario most likely to develop soon – where XBRL financial statements are prepared as the primary statements, with no corresponding report in paper, the impact on assurance standards is very different. Because this scenario essentially involves redefining the primary financial statements, in form and content, the Working Group believes that add-ons to the existing standards for financial reporting, especially ISA 700 are required to deal with financial statements in XBRL format.

Implementation of these add-ons will require that several other ISA's, such as those on planning, materiality, audit evidence, etc., will require add-ons to reflect the changed nature of the subject of the assurance. The Working Group has, in this paper, provided a general roadmap of the possible changes, but has not yet studied the implications in sufficient depth to provide concrete solutions.

Recommendations

This paper documents numerous assurance issues arising from the use of interactive data (XBRL) for business and financial reporting. Because the use of XBRL is growing rapidly, new standards are needed that are specifically directed to address the issues now.

This will involve more than simply writing a new standards section, although that is a necessary first step. The issues around XBRL are numerous, pervasive and evolving and only the immediate issues are addressed in this paper.

Further research is needed. We need to collect and monitor feedback from existing filing regimes and stakeholders regarding the use of XBRL. Discussion must take place with stakeholders about the need for future assurance on XBRL data, to gain a better understanding of the nature and scope of the market demand for assurance services.

Based on the outcome of discussions with stakeholders, we need to work further on the scenarios and related standards, to define the issues more clearly and to develop the new and revised standards. There may also be a need to work with legislators in some jurisdictions where financial statements are defined by law, to accommodate the new definition of financial statements that results from the use of XBRL.

It is critical that the audit profession, led by the International Assurance and Auditing Standards Board (IAASB) of the International Federation of Accountants (IFAC) take responsibility for the process of setting assurance standards and providing guidance related to information in electronic form such as XBRL, as this is the way for the future. The Assurance Working Group of XBRL International Inc. is gladly willing to support this initiative by providing subject matter expertise. Failure to act will result in the field of financial and business reporting being governed by an industrial standard, such as the ISO 14000, and a further deterioration of the role of the profession in the governance of its own core activity – the presentation of financial and business reports and the provision of assurance on them.

Accordingly, the Board should begin developing standards as outlined in this paper and should also develop a long term strategy with regard to XBRL beyond the promulgation of immediate standards. To do so, it should liaise with the XBRL community in its ongoing work. This is critical and the community stands ready to help.

TABLE OF CONTENTS

EXECUTIVE SUMMARY

A. INTRODUCTION

- 1. Objectives*
- 2. Scope*
- 3. Structure*

B. THE FINANCIAL REPORTING PROCESS

- 1. GAAP (Statutory filings / voluntarily disclosures)*
- 2. Compliance*
- 3. Enhanced Corporate Reporting*

C. THE CURRENT IFAC ASSURANCE FRAMEWORK

- 1. Scope of Assurance*
- 2. Audit and Examination Engagements, Reasonable Reliance*
- 3. Review Engagements, Limited Reliance*
- 4. Agreed-upon Procedures, No Reliance*

D. PROBABLE FUTURE REPORTING MODELS

E. THE CONCEPTS OF ELECTRONIC BUSINESS REPORTING BASED ON INTERACTIVE DATA

- 1. How XBRL Works*
 - (a) The XBRL Specification*
 - (b) XBRL Taxonomies*
 - (c) XBRL Instance Documents*
 - (d) Applications and Style Sheets*
- 2. Procedure For Preparing XBRL Reports*
- 3. Risks Of Error*

F. SCENARIOS FOR THE USE OF INTERACTIVE DATA

- 1. Traditional financial reporting converted to XBRL format*
- 2. Regulatory or Government filing*
- 3. XBRL instance document along with a style sheet presenting information (print)*
- 4. XBRL instance document only*
- 5. Assurance on XBRL based processes and controls (preparing of an instance document)*
- 6. Using XBRL internally for the (internal) reporting process*

G. THE IMPACT OF THE FUTURE REPORTING MODEL ON THE ASSURANCE STANDARDS

H. PROPOSALS FOR AN ASSURANCE FRAMEWORK FOR ELECTRONIC BUSINESS REPORTING - ISA 3000 PRINCIPLES

- 1. Acceptance*
- 2. Terms of engagement*
- 3. Planning the engagement – Understanding the subject matter*
- 4. Assessing the appropriateness of the subject matter*

5. Assessing the suitability of the criteria

(a) Criteria are the benchmarks used to evaluate or measure the subject matter

6. Risk and Materiality

7. Obtaining evidence

8. Using the work of an expert

9. Management representations

10. Reporting

I. CALL TO ACTION

Appendix A - XBRL Projects Completed or Underway

Appendix B - Reference sources: Analyses, research reports, publications and guidance

Appendix C - Members / Observers of the XII Assurance Working Group

A. INTRODUCTION

1. Objectives

001. This paper has been prepared to invite discussion regarding the assurance implications of Interactive Data³ (which refers to tagged data typified by XBRL, the Extensible Business Reporting Language⁴). The use of Interactive Data for various reporting purposes, particularly for filing with regulators and governments, has grown considerably over recent years. As its use grows, reliance of users on the data expressed in that format will increase, leading to a need for assurance on that data by independent auditors or public accountants. At present, there are no internationally acknowledged standards to support the provision of such assurance⁵.
002. It is well established that there is market demand for assurance on financial and business information. Assurance has been a fundamental part of the capital market system for many decades. As XBRL documents are issued and used by analysts and others and in many cases eventually replace traditional statements, the demand for assurance on the documents will grow. Auditors need standards to be able to deliver on this assurance. This paper sets out the suggestions of the Assurance Working Group of XBRL International as to the shape of those standards.
003. The need for standards exists now. The need for guidance and audit standards will grow very quickly in the short term and therefore the profession must address the standards issues now. The purpose of this document is to provide a basis for the development of assurance standards related to Interactive Data. It is specifically directed to the International Assurance and Auditing Standards Board (IAASB) of the International Federation of Accountants (IFAC).
004. There is a need for discussion with stakeholders about the demand for assurance services now and in the future on XBRL documents. Such discussions will assist in defining further the nature and scope of the needed assurance. This document is intended to generate discussion of the identified issues within the audit profession and other stakeholders. Accordingly, it is directed to:
 - Auditors
 - Governments
 - Stock exchanges
 - Shareholders
 - Financial institutions
 - Investors and analysts
 - Regulators and governmental administrators
 - E-filers / CFO community / IR community
 - Institutional investors and mutual funds.

³ A phrase coined by the U.S. Securities and Exchange Commissions (SEC); their spotlight on Interactive Data can be found at <http://www.sec.gov/spotlight/xbrl.htm>.

⁴ <http://www.xbrl.org>

⁵ The Public Company Accounting Oversight Board (PCAOB) has provided guidance for assurance on filings under the SEC voluntary filing program at www.pcaobus.org/Standards/Staff_Questions_and_Answers/2005/05-25%20.pdf

005. *This document focuses on the immediate issues pertaining to business and financial reporting. A further document will focus on the longer term issues in depth, for example, issues around continuous assurance, data level assurance, projections, and forecasts,*

2. Scope

006. This document provides an overview of the current reporting environment with regard to the use of Interactive Data, developments in electronic business reporting and the possible consequences for the future reporting and assurance model. It focuses on the major issues.

007. In the overview of the current reporting environment, various scenarios are identified where Interactive Data are used in reporting. This document is directed to the scenarios considered to have the highest priority and therefore deals extensively with assurance related to electronic filing of information with regulators and governments. Other important scenarios are also covered, however, as they will lead to assurance issues over the next two or three years. There is very little lead time available to develop the standards that will be needed. As companies move into the use of Interactive Data for filing and reporting purposes, professional accounting firms will need to be ready with the services their clients will need. Assurance standards are needed to enable the firms to respond to these new needs of their clients and the markets.

3. Structure

008. The document begins with an overview of the current financial reporting process and the current assurance framework. It then outlines the scenarios within which Interactive Data are being used, or expected to be used within the next three years and the current assurance standards that are relevant to this information. Finally, it considers how the existing standards might be applied in the scenarios identified, and outlines new standards that are needed to meet the needs of stakeholders.

B. THE FINANCIAL REPORTING PROCESS

1. GAAP (Statutory filings / voluntarily disclosures)

09. The financial reporting process focuses on the presentation of a number of documents for shareholders and other stakeholders. The centerpiece of the reporting process is the annual report, which contains the annual audited financial statements, along with other statements and reports. The Management Discussion and Analysis (MD&A) is often presented in the annual report, but sometimes is presented as a separate document. The financial reporting process also includes interim financial statements, periodic press releases and conference calls with analysts. In the past few years, more financial reporting has been carried out on the Internet, through corporate websites, and also through regulatory websites, like EDGAR in the US, SEDAR in Canada or Companies House in the UK. Many companies around the world have placed a greater emphasis on web reporting, in some cases considering it more important than the traditional paper based reporting as a means of communicating with stakeholders. On the Web, financial reports are most often presented as PDF or HTML files.

2. Compliance

010. Governments and regulators require financial reports to be filed with them and also often require the filing of additional specially designed forms, such as the 10K forms required by the US Securities and Exchange Commission (SEC). Historically, these filings were required in paper, but under contemporary practice, the filings can be, and often are required to be, in electronic form. However, there is a wide variety of technologies used in these filings, causing difficulties for the filers who must adjust their information systems to be able to produce the filings in the required format and also failing to deliver the full benefits of electronic filing to the regulators and government departments who must review the filings.
011. Numerous regulators, stock exchanges and government departments around the world are presently requiring or accepting filings of financial reports using XBRL. This applies especially in Europe, Asia and the United States. Few instances to date have involved the provision of assurance⁶; however, as the use of XBRL grows, it is likely that the demand for assurance by the users of such reports will emerge.

3. Enhanced Corporate Reporting

012. An additional significant trend of recent years has been an expansion of the scope of financial reporting that goes well beyond the traditional financial statements, such as performance reporting. It also includes the reporting of business matters that go beyond the traditional scope of financial reporting, such as environmental and sustainability reporting. Also, there has been a considerable emphasis on such matters as corporate governance. This trend is continuing and evolving, leading to a more formal emphasis on the Investor Relations Section of websites as a vehicle for financial and business reporting. Some companies also place XBRL instance documents on their websites.

⁶ An example being the United Technologies (UTX) filing found at <http://www.sec.gov/Archives/edgar/data/101829/000119312505247623/0001193125-05-247623-index.htm>.

C. THE CURRENT IFAC ASSURANCE FRAMEWORK

1. *Scope of Assurance*

013. “‘Assurance engagement’ means an engagement in which a practitioner expresses a conclusion designed to enhance the degree of confidence of the intended users other than the responsible party about the outcome of the evaluation or measurement of a subject matter against criteria.”⁷
014. Assurance on general purpose financial reporting focuses on the annual and sometimes the interim financial statements. Assurance is not provided directly on the content of the annual report other than the financial statements, although the auditors of financial statements included in an annual report must take responsibility to determine that the financial statements are faithfully reproduced and that the other content of the report is not inconsistent with the audited financial statements.
015. For statutory reporting, a report of auditors on financial statements is normally required, although in some jurisdictions there are exceptions for small non-public companies. Many of the forms filed with regulators and governments are required to have assurance reports on their content, which can extend well beyond traditional financial statements. Others simply require that the assurance reports provided on the traditional financial statements be included in the filing.
016. A variety of financial and other reports is provided for specified purposes, and assurance is often provided on these reports. Various existing assurance and attest standards apply to these reports.
017. As the scope (e.g., content, depth and frequency) of financial and business reporting grows, there is a recognition that the scope of assurance must grow as well. The users of the additional information provided by companies often require some form of assurance on that information.
018. For traditional financial statement audits, the auditor expresses an opinion on financial statements, stating whether they are fairly presented in accordance with generally accepted accounting principles (GAAP). In such engagements, the financial statements are the subject of the engagement and GAAP is the criteria applied in determining whether the opinion can be expressed. Every assurance engagement must have a subject and appropriate criteria. With Interactive Data, both the subject matter and the criteria (as well as the definition of materiality) must change, as the subject matter may involve an XBRL instance document, and/or the underlying data and/or the tagging/coding that accompanies the data. GAAP do not provide enough guidance on these subjects to be used alone as criteria.

2. *Audit and Examination Engagements, Reasonable Reliance*

019. Absolute assurance cannot be provided on financial reports. There is always some risk of material misstatement. The highest level of assurance that can be provided is that of reasonable assurance, which is the level that applies to audits. The purpose of an audit is

⁷ International Framework For Assurance Engagements, Introduction, Para 7, Handbook Of International Auditing, Assurance, And Ethics Pronouncements, IFAC, 2005 Edition.

to conduct an examination sufficient to reduce the risk of material misstatement to an acceptably low level. Audits are normally required on the financial statements of public companies and other publicly accountable organizations and on certain filings with governments and regulatory bodies. They are often provided on a voluntary basis for other financial reports of public companies and on the financial statements of non-public companies. In addition, audits are often provided on particular financial statement items, such as sales reported to a lessor under a lease agreement. Sometimes audits are provided on compliance with laws and regulations. Audit reports are also provided on internal controls, for example, under Section 404 of the US Sarbanes Oxley Act.

3. Review Engagements, Limited Reliance

020. A lower level of assurance commonly provided under current standards is that of limited assurance. This level, which applies to review engagements, results in the expression of assurance in the form of negative assurance, which states that “nothing has come to our attention to indicate that the financial statements are not fairly stated.” While an audit opinion is based on an examination of evidence to support the assertions made by management in the subject reports, negative assurance reports are based on enquiry, analysis and comparison, with little hard evidence being required.

4. Agreed-upon Procedures, No Reliance

021. Another type of engagement often confused with an assurance engagement is that of agreed-upon procedures under ISA 4400. Under such engagements, public accountants carry out procedures on a subject as agreed with the client and specified parties who intend to receive the report. The report is prepared for specified users, rather than for general purposes. The conceptual basis for an agreed-upon procedures report is that the agreed-upon procedures are performed and then the results are factually reported. There is no attempt to provide an opinion or any other type of assurance and because an opinion is not being expressed, the issue of appropriate criteria does not arise.

D. PROBABLE FUTURE REPORTING MODELS

022. Recent years have witnessed significant changes in the financial reporting environment. The traditional approach of reporting to shareholders using financial statements and the annual report has broadened to include the MD&A, sustainability reporting, performance reporting, and the reporting of specific data elements to represent specific performance indicators. The traditional approach of releasing the documents in paper form has largely shifted to the provision of information in electronic form, usually in PDF or HTML form.
023. While paper reports are no longer central to this environment, nevertheless the reports are based on, and similar in content to, paper reports. This might be termed the “paper-paradigm” environment.
024. The issue with the paper paradigm reporting system is that a human must read the reports in order to process them. When the recipient is a regulator or government agency, this is an ineffective use of resources in an environment that can take advantage of systems to reduce the need for human labour. Many regulators and governments around the world have recognized a need for electronic reports that are directly readable by their information systems, without the need for human intervention, except when anomalies arise that need to be followed up. Many of them have developed their own systems, which has led to a proliferation of different and incompatible systems that place a strain on those who must support the many different systems in order to comply with the filing requirements.
025. It is for this reason that organizations such as the SEC, the EU, the Committee of European Banking Supervisors (CEBS), the UK’s HM Revenue and Customs, governments from the Netherlands and Belgium, stock exchanges like KOSDAQ and the Shanghai Exchange and many others have moved to or towards the use of Interactive Data for their electronic filings. It is anticipated that the SEC will move to make XBRL filings mandatory within the next year and then *enable* “XBRL only” filings after that. Details about the activities of these organizations can be found at www.xbrl.org/ProjectDetails. A summary is provided in Appendix A to this report.
026. It is most likely that these changes will continue, accelerate and evolve. While the paper paradigm reports still exist, and likely will for some time, the provision of reports in the form of Interactive Data will grow. Assurance will be required on these reports above and beyond the traditional assurance. Members of the working group have discussed this matter with some analysts and received the clear message that assurance is needed on this data if it is to be useful to them.
027. Eventually, the paper-paradigm reports will disappear in some reporting situations, leaving the reports in Interactive Data to stand on their own. Most likely, this will happen first in filing with regulators and government agencies, where the only reports required to be filed will be in Interactive Data format. This will have a significant impact on the approach to be taken to assurance. No longer can reports be compared to paper-paradigm reports to determine their authenticity. The assurance must be on the Interactive Data reports (instance documents) alone. In these cases, any assurance on the human readable reports produced out of the instance documents will need to draw upon the assurance given on the instance documents.

- 028. As reporting evolves, it is likely that the reporting environment will see more situations where individual Interactive Data elements are reported and then used to generate user-prepared reports. There will need to be assurance on that data – data-level assurance – for the benefit of those users, investors and others. This again raises profound issues for assurance providers and for standards setters.
- 029. In the short term, there will be a need for standards specifically directed to the use of XBRL in statutory reporting to shareholders, filings with regulators and governments and voluntary disclosures. There is also a short term need for guidance on filings of a compliance nature. Most but not all of these uses will be in the context of the concurrent existence of paper-paradigm reports.
- 030. In the longer term, guidance will broaden considerably, to contemplate the absence of paper-paradigm reports, the use of XBRL for integrating reporting systems and the greater use of XBRL for specialized reports.
- 031. This future was recognized very recently in the November, 2006 paper released by the CEO's of the International Audit firms titled "Global Capital Markets and the Global Economy." On page 16 of that report, the CEO's said "over the past decade, accounting firms, public companies and regulators throughout the world have worked together on an initiative to categorize or "tag" a broad range of information and data that public companies have or can generate, and to make all of it easily accessible through the Internet. This global "XBRL" initiative, or perhaps other reporting related technologies, is likely at some point to revolutionize the entire company reporting model — what information is presented and how, and how it is audited."
- 032. The Assurance Working Group agrees, and believes the change is coming sooner rather than later.

E. THE CONCEPTS OF ELECTRONIC BUSINESS REPORTING BASED ON INTERACTIVE DATA

1. How XBRL Works

033. XBRL encompasses various components, the most critical of which to understanding the use of XBRL in the reporting process are the following:

- The XBRL Specification;
- XBRL Taxonomies;
- XBRL Instance Documents; and
- Presentation tools, including XSL (Extensible Stylesheet Language)

034. The relationships among these components are illustrated in the exhibits below:

Exhibit 1

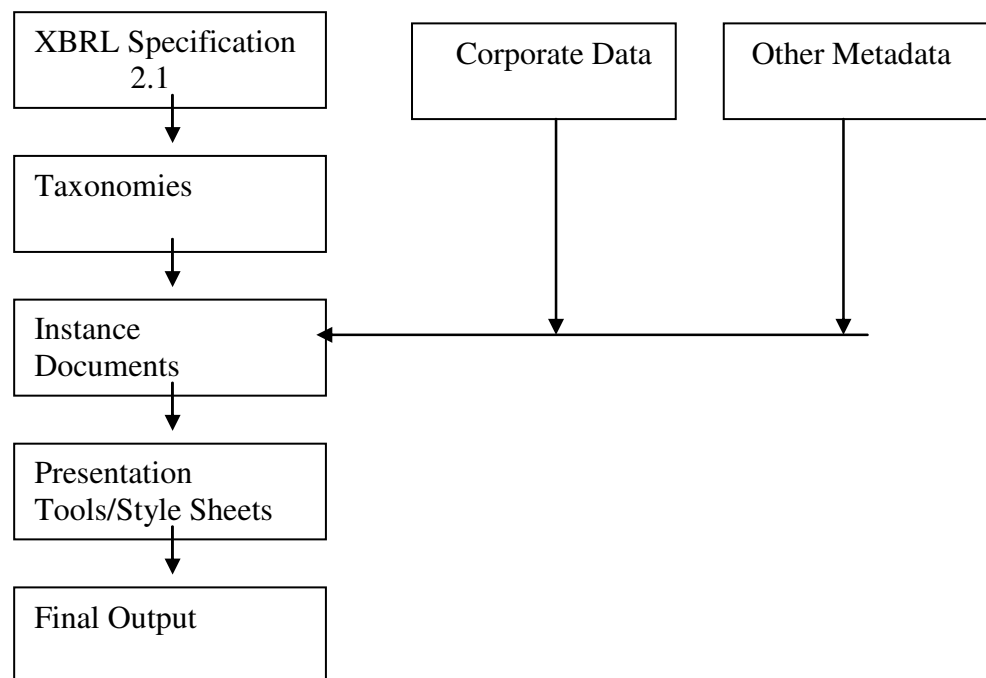
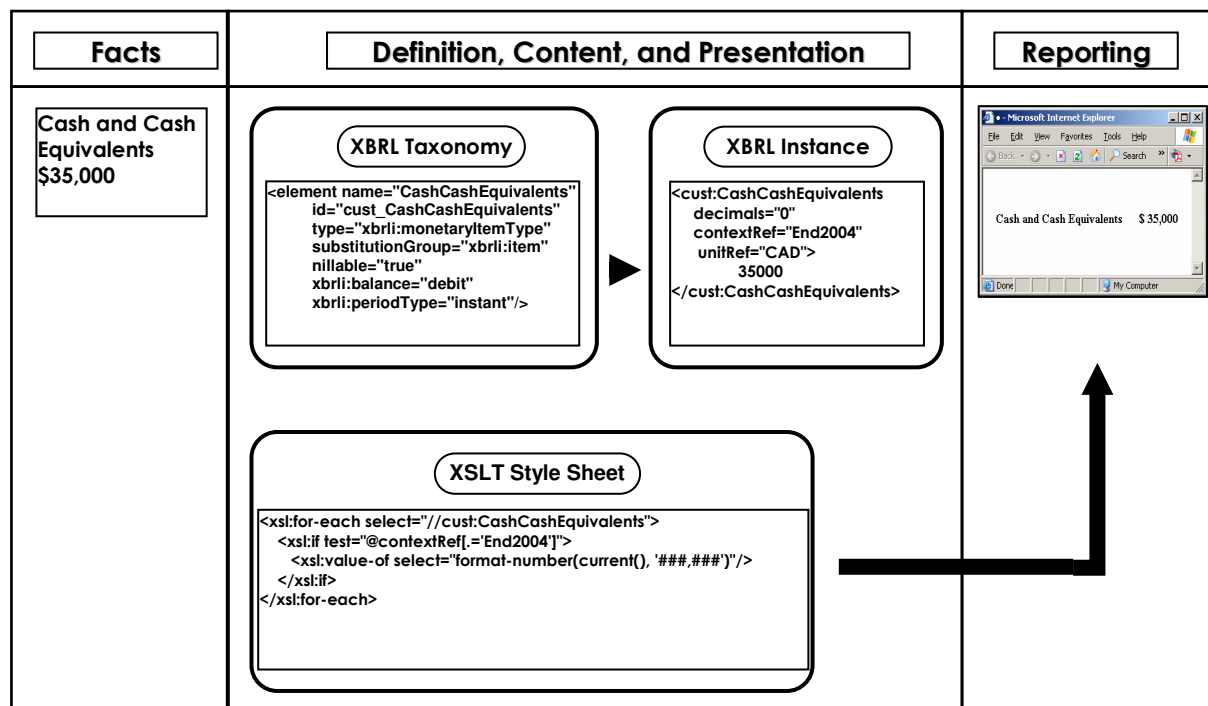


Exhibit 2:**XBRL Taxonomy, XBRL Instance Document and XSLT****(a) The XBRL Specification**

035. The current XBRL specification is version 2.1, which was released in December 2003 with corrections through April, 2005 by the XBRL Specifications Working Group (responsibilities now assigned to the XBRL Standards Board). It provides a technical explanation of what XBRL is and how it works, sets out the technical framework of XBRL, and explains in detail the syntax and semantics of XBRL taxonomies and instance documents. It is available for download from <http://www.xbrl.org>.

(b) XBRL Taxonomies

036. A taxonomy is a combination of files that describes the key data elements (numbers or text) to be included in an XBRL instance document for the purpose of a particular type of financial (or other type of business) reporting. These elements for financial reporting might include, for example, items like Cash, Accounts Receivable and Inventory. Accordingly, taxonomies are like dictionaries that contain the descriptions and definitions of the tags being used. Taxonomies contain the concepts and interrelationships used in a particular type of business reporting and, taken in conjunction with the instance documents, enable the reports to be constructed. Numerous taxonomies have been released, including that for International Financial Reporting Standards (IFRS) and taxonomies for the Generally Accepted Accounting Principles (GAAP) of particular countries. The XBRL GL (standardized Global Ledger) taxonomy has also been released, which guides the tagging of accounts and transactions in different systems to allow for the

interchangeability of data. This taxonomy will play a particularly important role in the integration of reporting systems.

- 037. Many taxonomies are available for download from <http://www.xbrl.org> and other sites. The IFRS taxonomy is available from <http://www.iasb.org/xbrl/index.html>. An excerpt from a taxonomy is shown in Exhibit 2. Most organizations will begin with a collaboratively developed taxonomy such as that of the IFRS and then use appropriate methods to customize and extend them to best represent their own situation.
- 038. The descriptions of data in the instance documents, and ultimately in the financial statements produced, are derived from the taxonomies being used. These taxonomies are developed in accordance with the XBRL Specification to recognize particular sets of rules, such as generally accepted accounting principles, or the forms used to file financial statements with regulatory authorities. Numerous taxonomies are being developed around the world to enable electronic filing under the particular requirements of regulators, tax authorities and other government departments and agencies.

(c) XBRL Instance Documents

- 039. Instance documents consist of a collection of data elements tagged according to the concepts found in the taxonomies being used. As an example, suppose Company X is preparing financial statements in accordance with IFRS. It will prepare an instance document that contains the amounts for specific items (such as cash on hand on December 31, 2005) and link those items to the category within which they should appear under the IFRS taxonomy. The taxonomy describes the items and the instance documents contain the actual amounts or details of the items.
- 040. XBRL instance documents are a collection of data and explanatory tags, but are not arranged in a “user friendly” manner. They are intended to be read by computers, not humans. Instance documents can be used to prepare human-readable reports, but are not, in themselves, optimized to be human-readable. XBRL was designed for moving data reliably and consistently between systems. Nevertheless, tools for reading instance documents are becoming increasingly user-friendly and transparent. Again, Exhibit 2 contains an excerpt from an instance document.

(d) Applications and Style Sheets

- 041. XBRL provides all of the content and context needed to allow applications to present the information found in instance documents in numerous ways. There are many examples of applications that take the data from instance documents and turn them into a people-friendly form. An add-in to Internet Explorer from one vendor creates a quick report from any proper instance document. Add-ins to Microsoft Excel can likewise create quick reports or bring data into templates designed by the developers or users for particular analytical needs.
- 042. An application-independent, standardized language for presentation of XML data published by the W3C (the World Wide Web Consortium), the organization that oversees XML itself, is called XSL (Extensible Stylesheet Language). While neither XBRL International nor any other existing taxonomy developer officially publishes XSL stylesheets, other organizations or the individual companies providing XBRL versions of

their business reports may provide XSL for viewing their documents in a more standardized fashion, although this will remain optional.

- 043. XSL stylesheets add the necessary presentation elements to the data from the instance documents, yielding results that looks like financial statements. Corporate data can then be presented in HTML, PDF, word processing or other presentation formats that can be read by humans.

2. Procedure For Preparing XBRL Reports

- 044. The basic data that go into an instance document come from accounting systems or other sources, such as spreadsheets. XBRL makes use of XML “tags”, which are means of marking data. In XBRL, this means that certain data in a source document or in data files can be “tagged” and represented independently, without losing context, within an instance document. These tagged data are mapped to the taxonomy, using software tools intended for this purpose. This mapping can then be saved and the underlying data can be displayed in trial balance-like format.
- 045. Several accounting programs include the functionality to create XBRL instance documents. Financial statements can be prepared from these instance documents using stylesheets, or the data can be directly imported into budgeting and analysis tools.
- 046. XBRL can be used in a variety of ways. As mentioned, the instance documents can be filed with regulators and others, in lieu of or in addition to human-readable reports. Accordingly, the use of XBRL may mean that human-readable financial reports may not be prepared. For financial reporting purposes, an instance document that is prepared in accordance with, for example, the IFRS taxonomy, can be posted on a web site. Analysts and others can then simply download the instance document and import the data into their own analytical tools and prepare their own comparative reports, bringing in the data of other companies from numerous web sites, and consolidating that information for analysis. With XBRL, this process can be automated and used to retrieve data periodically from a variety of sources.
- 047. This use of XBRL bypasses printed financial statements and, from an assurance viewpoint, highlights issues involving the status and completeness of the data being retrieved even though that data may be contained elsewhere, in audited financial statements, on the web site, or in printed format.

3. Risks Of Error

- 048. When financial statements or regulatory filings are prepared using XBRL, the usual risks of misstatement related to financial statements apply, but there are additional risks related to the accurate mapping of the accounts to the tags, and the use of the appropriate taxonomies. The accurate mapping of the tags will ensure that the data retrieved are the intended data. If financial information were to be streamed in real time, the risk of misstatement in the financial statements could become higher, depending on the controls in place over any changes in that data, and the controls in place over changes in the mapping of data to tags. In this case, there would be an additional risk that the data being picked up through the tags might change, and that the changes will contain errors or be

unaudited. This would indicate a need for additional controls to ensure that the data retain their integrity.⁸

- 049. Various issues arise out of the XBRL procedures described above. As long as there are both paper paradigm reports and interactive data reports, the question will arise of what it means for one to be the same as the other. This is a fundamental issue because assurance providers on reports in both formats will need to know when the two are the same and when they are not. However, the issue is not clear cut. For example, do the labels used for presentation of tagged data need to exactly match the paper paradigm reports, or can they vary? How close to the exact authoritative reference or human readable definition do the elements have to be? Has proper consideration for tagging detail embedded within particular notes been given? Standards are needed on this type of issue.
- 050. Data are tagged using elements derived from certain taxonomies. But there are different taxonomies. Why were certain taxonomies (and taxonomy versions) chosen? Were the choices appropriate? Which elements from the chosen taxonomies were used? Why were the decisions to use those elements made?
- 051. Many organizations implementing XBRL find they need to develop extensions to the taxonomies they started with, in order to represent their own particular circumstances or facts peculiar to them or their industry. While some extensions are likely inevitable, too many extensions can serve to destroy the very standardization of data classifications that XBRL is intended to foster. This is the issue of flexibility vs. standardization. When organizations employ taxonomy extensions, they need to be able to demonstrate that the extensions are appropriate. Since this could be an area where considerable variations in practice could develop, professional standards are needed around the issue of extensions.

⁸ Integrity, in terms of data and network security, is the assurance that information can only be accessed or modified by those authorized to do so – SearchDataCenter.com.

F. SCENARIOS FOR THE USE OF INTERACTIVE DATA

052. It is clear that there are numerous scenarios in which XBRL is being and will be used and that the assurance issues depend to a considerable extent on the scenario in which the assurance is provided. While some of the scenarios are likely to evolve in the longer term, the standards should be available before they occur rather than afterwards. The Assurance Working Group has identified the following scenarios as being particularly important for the provision of standards guidance:

1. Traditional financial reporting converted to XBRL format

053. The first common occurrence is where the traditional financial statements are converted to an XBRL instance document which is provided to outside parties or included on a website. In this situation, the traditional financial statements are available in the usual way. The purpose of the instance document is most likely to be to facilitate the import of the data into a user spreadsheet or analysis tool. *In this case, the user is most likely to require assurance that the data represented in the instance document is the same as the data in the audited financial statements.* The user may also be concerned that the appropriate taxonomies are used and that the data were tagged and mapped correctly.

2. Regulatory or Government filing

054. Instance documents are being used to file with regulatory and governmental agencies around the world. In some cases, the instance document is the only document provided, and in other cases, the filing is accompanied by traditional documents that are human readable. A distinction needs to be made between these two situations. Where the instance document is provided alone, the recipient will require assurance that the data included therein is accurate and properly stated and in accordance with the applicable rules and legislation, and will require assurance that the proper taxonomy is used and applied correctly. Where traditional documents accompany the instance documents, the user will also require assurance that the data in the traditional documents are the same as the data in the instance document and meets the regulatory and legislative requirements.

3. XBRL instance document along with a style sheet presenting information (print)

- a. XBRL instance document along with a style sheet (of a third party) presenting information (print)
 - b. XBRL instance document along with a style sheet (company specific) presenting information (print)
055. In these scenarios, an XBRL instance document is prepared and then used to generate financial statements or reports, either for general purpose reporting (instance a) or for specified purposes reporting (instance b). Both the instance document and the style sheet are presented to the users. In these cases, the users will likely use the instance document to import the data into their analysis tools or spreadsheets. They require assurance that the instance document has been prepared using the appropriate taxonomy, that the data have been properly tagged and mapped and that the instance document has been properly rendered into readable form in the style sheet and contains the same data. They also may require assurance on the style sheet itself, including the data therein – because style sheets are programming tools, must be treated with caution.

4. XBRL instance document only

056. This scenario is most likely to occur in the case of filings with regulatory agencies and governments, which is covered in scenario 2. [Also indicate that this scenario will occur when financial statements in XBRL format will be the way to provide the needed and legal mandated information.] In that case the users will require assurance that the instance document has been prepared using the taxonomy that is appropriate to their specified purposes and has been properly tagged and mapped. They also may require assurance on the underlying data in the filing, like the current audit opinion on paper filings, like the financial statements.

5. Assurance on XBRL based processes and controls (preparing of an instance document)

057. In any of the situations where instance documents are prepared, the users may require assurance with regard to the processes used for preparation. This would include the XBRL specific processes such as taxonomy selection, and tagging, but would also include, for example, the other processes and controls involved, such as the division of duties and the oversight and review controls employed.

6. Using XBRL internally for the (internal) reporting process

058. There may be situations where XBRL is used internally to produce financial statements and other reports and effectively becomes one of the technologies used in the preparation process. In these cases, no particular assurance is required on the XBRL portion of the process, but assurance is required on the overall system of controls over financial reporting. This may involve the internal audit function.
059. In these situations, the provision of the required assurance will necessitate the consideration of the adequacy of the controls over the XBRL specific processes in the context of the overall system of controls for which the assurance is required. From an assurance point of view, the XBRL portion of the system is fundamentally no different than any of the other technological components of the system.

G. THE IMPACT OF THE FUTURE REPORTING MODEL ON THE ASSURANCE STANDARDS

060. The assurance implications of XBRL vary with the scenarios in which XBRL is used.. The preceding section outlines the scenarios that presently exist, and those that are expected to occur in the future. The paper deals extensively with the most common scenario at present – that where traditional financial statements are converted to XBRL format and both versions presented for external consumption. It is proposed that a solution making use of ISA 3000 is appropriate for this purpose. However, important changes are required in that standard, either by amending the standard or by developing a supporting guidance document.
061. For the other scenario most likely to develop soon – where XBRL financial statements are prepared as the primary statements, with no corresponding report in paper, the impact on assurance standards is very different. Because this scenario essentially involves redefining the primary financial statements, in form and content, the Working Group believes that add-ons to the current standards for the financial statements (ISA's 100 – 999), especially the current version of the standard auditors report as set out in ISA 700 is required. Implementation of these add-ons or revisions will require that several other ISA's will require amendment as well, to reflect the changed nature of the subject of the assurance. The Working Group has, in this paper, provided a general roadmap of the possible changes, but has not yet studied the implications in sufficient depth to provide concrete solutions. Preliminary research suggests, however, that at least the following ISA's require change to reflect the new definition of financial statements that results from their provision in XBRL format only:

200	Objective and General Principles Governing an Audit of Financial Statements
300	Planning an Audit of Financial Statements
315	Understanding the Entity and Its Environment and Assessing the Risks of Material Misstatement
320	Audit Materiality
330	The Auditor's Procedures in Response to Assessed Risks
500	Audit Evidence

062. The remainder of this document deals with the topics to consider to develop a specific ISA 30xx standard dealing with XBRL filings, based on the principles of ISA 3000.

H. PROPOSALS FOR AN ASSURANCE FRAMEWORK FOR ELECTRONIC BUSINESS REPORTING – based on ISA 3000 PRINCIPLES

063. Assurance on XBRL documents can take place in numerous situations where the subject of the engagement is not financial statements and the assurance standards are not specifically framed to apply directly to XBRL. However, the International Standard on Assurance Engagements (ISA) 3000, dealing with Assurance Engagements Other Than Audits or Reviews of Historical Financial Information, can be applied to these situations. Accordingly, it is appropriate to use ISA 3000 as a basis for an assurance framework for engagements on XBRL data.
064. The ISA standards cover several areas that are particularly relevant to XBRL Engagements. These areas are discussed below.

1. Acceptance

065. **The practitioner should accept (or continue where applicable) an assurance engagement only if the practitioner is satisfied that those persons who are to perform the engagement collectively possess the necessary professional competencies.** A practitioner may be requested to perform assurance engagements on a wide range of subject matters. Some subject matters may require specialized skills and knowledge beyond those ordinarily possessed by an individual practitioner. (ISA 3000, Paragraph 9)
066. ISA 3000 covers several matters to be considered before accepting or continuing an engagement. They include:
- Terms of the engagement.
 - Characteristics of the subject matter and the identified criteria.
 - Engagement process and possible sources of evidence.
 - Practitioner's understanding of the entity and its environment, including the risks that the subject matter information may be materially misstated.
 - Identification of intended users and their needs, and consideration of materiality and the components of assurance engagement risk.
 - Personnel and expertise requirements, including the nature and extent of experts' involvement.
067. Most of these are discussed further in the sections below. The last item, personnel and expertise requirements speaks to an issue of particular importance in XBRL engagements – the degree of knowledge and understanding of the practitioners about XBRL. XBRL is based on a technology and a complete understanding of it requires an understanding of information technology and XML concepts. However, it is first and foremost an accounting construct and requires a strong knowledge of accounting. The tools that are available enable an accountant to see past the technology to the accounting issues.
068. The standards require that in examination engagements regarding XBRL-Related Documents, the auditor must have sufficient knowledge of the XBRL taxonomies and specifications to perform the examination. The auditor must also have sufficient knowledge of the company's financial statements and financial records to understand the

data in the XBRL-Related Documents and ultimately be able to assess the risk of misstatement in the subject matter information.

2. Terms of engagement

069. **The practitioner should agree on the terms of the engagement with the engaging party.** To avoid misunderstandings, the agreed terms are recorded in an engagement letter or other suitable form of contract. (ISA 3000, Paragraph 10)
070. This standard effectively establishes a requirement for an engagement letter. Engagement letters that would be appropriate for an XBRL engagement would be tailored to reflect the nature of the XBRL statements as well as any additional assurance issues arising from following XBRL processes.

3. Planning the engagement – Understanding the subject matter

071. **The practitioner should obtain an understanding of the subject matter and other engagement circumstances, sufficient to identify and assess the risks of the subject matter information being materially misstated, and sufficient to design and perform further evidence-gathering procedures.** (ISA 3000 Paragraph 15)
072. This stage builds on the degree of knowledge required on acceptance of the engagement. At the acceptance stage, the practitioner must possess enough understanding of the subject matter, including XBRL, to be able to carry out the engagement. At that point, the practitioner has gathered little or no evidence. At the planning stage, however, the practitioner is required to gather information sufficient to assess the risk of material misstatement. The knowledge required at the acceptance stage would be sufficient to enable the practitioner to make a preliminary assessment of the risks of material misstatement.
073. The ISA standard also points out that the level of understanding that is required also will help the practitioner to:
- Consider the characteristics of the subject matter;
 - Assess the suitability of criteria;
 - Identify where special consideration may be necessary, for example factors indicative of fraud, and the need for specialized skills or the work of an expert;
 - Establish and evaluate the continued appropriateness of quantitative materiality levels (where appropriate), and consider qualitative materiality factors;
 - Develop expectations for use when performing analytical procedures;
 - Design and perform further evidence-gathering procedures to reduce assurance engagement risk to an appropriate level; and
 - Evaluate evidence, including the reasonableness of the responsible party's oral and written representations.
074. The standard recognizes that the practitioner uses professional judgment to determine the extent of the understanding required and that the practitioner ordinarily has a lesser depth of understanding than the responsible party.

4. Assessing the appropriateness of the subject matter

075. The subject matter of an XBRL engagement could be an XBRL Instance document; a style sheet, or a human-readable report rendered from an XBRL document. These documents may or may not be accompanied by traditional paper-paradigm reports. The subject of the report could also be the processes and/or controls over the preparation of the XBRL documents, or the controls over financial reporting generally that would include the XBRL related processes.
076. The ISA 3000 standard states that the practitioner should assess the appropriateness of the subject matter. In explaining this standard, it included the following comment:
077. An appropriate subject matter is :
- a) Identifiable, and capable of consistent evaluation or measurement against the identified criteria; and
 - b) Such that the information about it can be subjected to procedures for gathering sufficient appropriate evidence to support a reasonable assurance or limited assurance conclusion, as appropriate. (ISA 3000, paragraph xx)
078. In applying this standard in an XBRL engagement, the practitioner would need to take care in specifically identifying the subject matter to which the report is intended to apply – whether it is (1) an XBRL document, (2) a rendered report, (3) the controls over preparation, or other assertions. It would also be necessary to consider whether sufficient procedures can be carried out to measure the subject matter against the criteria to be used. Thus the appropriateness of the subject matter is linked closely to the criteria to be used and the availability of sufficient appropriate evidence to form a basis for a report.

5. Assessing the suitability of the criteria

079. The practitioner is required under ISA 3000 to assess the suitability of the criteria to evaluate or measure the subject matter.

(a) Criteria are the benchmarks used to evaluate or measure the subject matter.

080. The PCAOB of the US released a Q&A in 2005 dealing with XBRL engagements, and applied the US standard AT 101, which is similar to ISA 3000. In that release, the PCAOB took the position that the appropriate criteria for an XBRL engagement as follows:
081. “The US GAAP Version 2.1 based taxonomies, Stand Alone Add-on taxonomies, and XBRL Specification Version 2.1 would be considered suitable and available criteria because (a) they were developed by a panel of widely recognized experts that follow due process procedures, including exposure for public comment, and (b) they are available free of charge through the XBRL Consortium.”
082. This standard can be applied for engagements in the international arena. The Specification 2.1 is an accepted International Standard and meets all suitability characteristics under ISA 3000. Of course, in an international setting, organizations may use GAAP other than

US GAAP, including their own country GAAP, or increasingly, IFRS. Any taxonomy that is acknowledged (or approved) by XBRL International will have gone through a due diligence approach and would likely qualify as suitable criteria. However, the taxonomies are usually extended when they are applied to meet the particular needs of the user organization, and sometimes these extensions can be extensive. Accordingly, the practitioner in an XBRL engagement would need to determine that the taxonomy selected is an acknowledged or approved one, that the extensions are appropriate, and that the taxonomy, as extended, remains suitable criteria.

083. If this is not the case, then the practitioner will need to assess how well the taxonomy (or taxonomy set) has captured the original criteria being used (GAAP or other accepted criteria).
084. The drivers that determine the quality or appropriateness of the taxonomy, or taxonomies, used are:
 - Authority – was the taxonomy published, recommended or endorsed by the recognised peak body for reporting in the particular domain. The more authority the taxonomy publisher has the lower the engagement risk in relation to the taxonomy as criteria used.
 - History – has the taxonomy been used in the past in equivalent circumstances and what was the result of assurance on it. The more widely used a taxonomy is, the more likely it is that material errors in it will have been discovered, and thus the lower the engagement risk in relation to the taxonomy as criteria used.
 - Purpose – was the taxonomy created to address the needs of the report upon which the engagement is based, or was it created for an ancillary purpose. The more direct the link between the stated objective of the taxonomy publisher and the objective of the report, the lower the engagement risk in relation to the taxonomy as criteria used.
085. Having made an assessment on the quality/appropriateness of the taxonomy itself, the practitioner will need to assess the appropriateness of the elements used to tag the underlying data. The key difference between an XBRL version and a paper version is that the underlying authority for the measurement and disclosure of the item is explicit in an XBRL instance but implied or inferred in the paper version.
086. Thus, the first task of the practitioner is to identify the underlying authority for measurement and disclosure of every item in the original report. XBRL taxonomies should contain explicit references to the underlying authority for each element, in the Reference Linkbase. This reference should point to some authority that defines the shared understanding of members of this particular domain on what concept this element represents. - - - The practitioner needs to be satisfied that the reference of each element in the XBRL instance is appropriate when compared to the (inferred) reference to that same data element in the paper version. It is the responsibility of mngt that the tags and labels are right and the assurer should do the necessary tests.

6. Risk and Materiality

087. Assurance engagement risk is the risk that the practitioner expresses an inappropriate conclusion when the subject matter information is materially misstated.⁹ When financial statements or regulatory filings are prepared using XBRL, the usual risks of error related to financial statements are present, but there are additional risks related to the use of the appropriate taxonomies and the accurate mapping of the accounts to the tags. Accurate mapping of the tags will help ensure that the data retrieved is the intended data. If financial information were to be streamed in real time, the risk of error in the financial statements could become higher, depending on the controls in place over any changes in that data, and the controls in place over changes in the mapping of data to tags. In this case, there would be an additional risk that the data being picked up through the tags might change, and that the changes will contain errors or be unaudited. This would indicate a need for additional controls to ensure that the data retains its integrity.¹⁰
088. The practitioner should consider materiality and assurance engagement risk when planning and performing an assurance engagement. Generally, for the purposes of assurance engagements a misstatement is defined as material if it is likely to have an impact on decisions made by the users of the subject document.
089. In the case of XBRL documents, the materiality will vary according to the subject matter of the engagement. If it is a rendered financial statement, or other report, or a system of controls, then materiality will be determined in the same way as with any other engagement. In the case of instance documents, it would be a general presumption that the materiality would be similar to that of the document rendered from the instance document.
090. Some XBRL engagements could involve the presentation of individual data elements, in which case, the materiality would be determined with reference to the particular item or items being disclosed.

7. Obtaining evidence

091. The following are examination procedures that the auditor should consider to achieve the engagement objectives where the XBRL documents are presented in addition to conventional financial statements:
- If the subject matter is an instance document, apply computer assisted audit software to match it to a human readable form.
 - Determine whether the content in the Instance Documents conforms to the applicable legislative or regulatory requirements.
 - Determine whether the XBRL-Related Documents (and the related taxonomy documents, as necessary) conform to the applicable legislative or regulatory requirements. To accomplish this, the auditor should consider the following procedures:
 - Test whether the data elements (i.e., text and line item names and associated values, dates and other labels) in the XBRL-Related Documents reflect the

⁹ International Framework for Assurance Engagements, para 48.

¹⁰ CICA White paper, Page 4

same information as the corresponding source document (i.e., the HTML or ASCII version).

- Evaluate whether the XBRL-Related Documents comply with the appropriate XBRL specification and appropriate XBRL taxonomies.
- Evaluate whether any company extensions of the taxonomy are consistent with applicable legislative or regulatory requirements and XBRL specifications.
- Test whether data elements in the XBRL-Related Documents are matched with appropriate tags in accordance with the applicable taxonomy.
- Assess whether the XBRL-Related Documents comply with applicable legislative or regulatory requirements and obtain a representation letter from management that includes a statement to that effect.

8. Using the work of an expert

092. When the work of an expert is used in the collection and evaluation of evidence, the practitioner and the expert should, on a combined basis, possess adequate skill and knowledge regarding the subject matter and the criteria for the practitioner to determine that sufficient appropriate evidence has been obtained. In XBRL engagements, it would often be prudent to engage a specialist for at least the initial engagement. This would be necessary in order to ensure that the knowledge of the process of instance document generation, taxonomies, and other elements of the XBRL process, along with the risks of misstatement are properly taken into account. The need may be less in subsequent engagements.

9. Management representations

093. The practitioner should obtain representations from the responsible party, as appropriate. Such a letter must be specifically crafted for the nature of the engagement, taking into account the subject matter, the criteria and the level of assurance requested.

10. Reporting

094. As required in ISA 3000, the assurance report should include the following basic elements:
- a) A title that clearly indicates the report is an independent assurance report
 - b) An addressee
 - c) An identification and description of the subject matter information and, when appropriate, the subject matter
 - d) Identification of the criteria
 - e) Where appropriate, a description of any significant, inherent limitation associated with the evaluation or measurement of the subject matter against the criteria
 - f) When the criteria used to evaluate or measure the subject matter are available only to specific intended users, or are relevant only to a specific purpose, a statement restricting the use of the assurance report to those intended users or that purpose
 - g) A statement to identify the responsible party and to describe the responsible party's and the practitioner's responsibilities
 - h) A statement that the engagement was performed in accordance with ISAs
 - i) A summary of the work performed

At present, ISA 700 does not provide guidance on providing an opinion in electronic format. The current standards only provide guidance on how to report in a paper paradigm. To provide an audit opinion in electronic format, we need to develop a taxonomy for the audit opinion and we need to provide guidance for the auditor when issuing an audit opinion in electronic format related to the subject matter (a XBRL instance document) and how to ensure the integrity and authenticity of the audit opinion and the subject matter.

I. CALL TO ACTION

- 095. This paper documents numerous assurance issues arising from the use of interactive data (XBRL) for business and financial reporting. Because the use of XBRL is growing rapidly, new standards or add-ons are needed that are specifically directed to address the issues now.
- 096. This will involve more than simply writing a new standards section, although that is a necessary first step. The issues around XBRL are numerous, pervasive and evolving. As mentioned earlier, only the immediate issues are addressed in this paper.
- 097. It is important that the IAASB take ownership of the assurance issues in the XBRL space. Accordingly, the Board of IFAC should develop a long term strategy with regard to XBRL beyond the promulgation of immediate standards. To do so, it should liaise with the XBRL community, in its ongoing work. This is critical and the community stands ready to help.

APPENDIX A

XBRL Projects Completed or Underway (www.xbrl.org/ProjectDetails/, November 7, 2006)

Analysts

- Germany - S&N Paderborn
- US - Edgar Online

Exchanges

- Korea - KOSDAQ
- New Zealand Stock Exchange
- Tokyo Stock Exchange

Preparers

- Germany PPA
- Netherlands Insurance Basic Life
- Netherlands Local Government
- Netherlands National Budget
- Netherlands Water Board
- South Africa Pension Fund

Regulators

- Belgium National Bank
- Denmark - Danish Commerce and Companies Agency (DCCA)
- Deutsche Bundesbank
- Germany PPA
- Netherlands Local Government
- Netherlands Water Board
- New Zealand Government Taxonomy Project
- South Africa Pension Fund
- Spain - Banco de Espana
- Spain - Mercantile Register
- Spain - Securities Commission
- UK - Financial Services Authority
- UK - Inland Revenue
- US - Federal Financial Institutions Examination Council (FFIEC)

Other

- European Committee of Central Balance Sheet Data Offices (ECCBSO)
- Germany Datev
- Germany EY Capital Reporting
- Germany Fraport
- Germany - IPSI
- Japan Hitachi High Technologies
- Japan - Teikoku Databank, Ltd.
- Japan - Tokyo Shoko Research, Ltd
- Japan - Wacoal
- Netherlands Insurance Basic Life
- Netherlands National Budget

APPENDIX B

Reference sources: Analyses, research reports, publications and guidance

- The initial findings of research performed by a XBRL-USA (a group representing the major audit firms and the AICPA) focused on the audit issues related to the voluntary XBRL SEC filings; presentation by Michael Krzus CPA (GT), Mostafa Popal CPA (J.H.Cohn) and Jenn Moriarty CPA (KPMG)
- A forensic review of the systems and procedures necessary to complete the XBRL SEC filing (10K) of Microsoft; presentation by Michael Ohata (Director Reporting Standards, Corporate Controller, Microsoft Finance)
- The research study “Electronic Filings and Reporting, Emerging Technologies and Their Implications”, published by the Canadian Institute of Chartered Accountants, 2005.
- Staff Questions and Answers related to the topic “Attest Engagements Regarding XBRL Financial Information Furnished under the XBRL Voluntary Financial Reporting Program on the Edgar System”, published by the PCAOB on May 25, 2005
- IFAC Staff Discussion document “Financial Reporting on the Internet”, February 2002
- The FEE Issues Paper “Principles of Assurance: Fundamental Theoretical Issues with respect to Assurance in Assurance Engagements”, April 2003
- Draft “Implementation Consideration for an XBRL Report”, focusing on AT 101, February 8, 2005
- Discussion Document “Third Party Assurance and Considerations Regarding XBRL Instance Documents of Audited Financial Statements”, AICPA XBRL Implementation Task Force, December 2002
- Information for Better Markets Digital Reporting: a progress report” published by the Institute of Chartered Accountants in England and Wales, September 2004.
- “Secure IT Infrastructure for E-commerce” by J.E. Boritz Phd, FCA, CA.CISA/IT, 2005
- “Global Capital Markets and the Global Economy.”, November, 2006, a paper released by the CEO’s of the International Audit firms/networks.

APPENDIX C**Members / Observers of the XII Assurance Working Group**

Name	Organization	Represents	Country
Members			
Harry Everaerts	E&Y	IBR	BE
Olivier Holt	PWC	ICAI	IE
Louis Matherne ¹¹	AICPA	XII / AICPA	US
Trevor Pyman		ICAA / CPA AU / XBRL AU	AU
Bill Swirsky (Vice-Chair)	CICA	CICA	CA
Anders Hult	Deloitte	XBRL SE	SE
Lars Dyrner	KPMG	FSR / XBRL DK	DK
Janice Patrisso	KPMG	KPMG	US
Hans Verkruijsse	E&Y	NIVRA / XBRL NL	NL
Eric Cohen	PWC	PWC / XBRL GL	US
Mike Willis	PWC	PWC	US
Akira Matsuo	PWC	JICPA	JP
Yossef Newman	Deloitte	Deloitte	US
Efrim Boritz	University of Waterloo	University of Waterloo	CA
Daniel Roberts	GT	Chair Accounting WGXX	US
Jan Pasmooij (Chair)	NIVRA	NIVRA / XBRL NL	NL
Paul Snijders	Semansys	XBRL NL	NL
Jerry Trites	Zorba Research Inc	CICA	CA
Judith Sherinsky	AICPA	AICPA	US
Dr. Ashok Haldia	ICAI	ICAI	India
Dries Schockaert	IBR	IBR	BE
John Court	ICAEW	ICAEW	UK
Björn Rydberg	E&Y	XBRL SE	SE
Per Thorling	PWC	XBRL SE	SE
Thomas Lilienbecker	KPMG	KPMG	US
Observers			
Hilde Blomme	FEE	FEE	BE
Graham Terry	SAICA.	SAICA	SA
Giancarlo Pellizzari ¹²	CBFA	CBFA	BE

¹¹ Until April 2006

¹² Until June 2006

